

**DATA VERIFICATION OF THE OU-4B AND OU-5 SOIL INVESTIGATION
METEORIC WATER MOBILITY PROCEDURE (MWMP) SAMPLES
COLLECTED AT THE ANACONDA COPPER MINE SITE IN YERINGTON, NEVADA
ON DECEMBER 4 AND 5, 2019**

Laboratory: TestAmerica Irvine

Samples:

Field Sample Identification	Date Sample Prepared	SDG	Parameters Examined
STSB05_0.5-3	12/4/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB05_6-15	12/4/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB05_45-55	12/4/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB05_66-71	12/4/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB05_76-81	12/4/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_0.5-3	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_6-15	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06-FD_0.5-3 (Field Duplicate of STSB06_0.5-3)	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_35-45	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_45-51	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_56-61	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
STSB06_66-71	12/5/2019	L56453	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra

Parameters & Methods:

- M¹ - ICP Metals (specifically, aluminum, barium, boron, calcium, iron, lithium, magnesium, phosphorus, potassium, sodium, strontium, tin, and titanium) by SW-846 Method 6010D.
- M² - ICP/MS Metals (specifically, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, silver, thallium, thorium, uranium, vanadium, and zinc) by SW-846 Method 6020B.

Hg	-	Mercury by SW-846 Method 7470.
CN	-	Cyanide, Weak Acid Dissociable (WAD) by Standard Method 4500-CN I.
Cl	-	Chloride by Standard Method 4500-Cl E.
F	-	Fluoride by Standard Method 4500-F C.
SO ₄	-	Sulfate by ASTM Method D516-07.
N	-	Nitrate Nitrogen, Nitrite Nitrogen, and Nitrate/Nitrite Nitrogen by US EPA Method 353.2.
TKN	-	Total Kjeldahl Nitrogen by US EPA Method 351.2.
ALK	-	Total Alkalinity, Bicarbonate Alkalinity, Carbonate Alkalinity, and Hydroxide Alkalinity as CaCO ₃ by Standard Method 2320B.
TDS	-	Total Dissolved Solids by Standard Method 2540C.
²²⁶ Ra	-	Radium-226 by US EPA Method 903.1 (modified).
²²⁸ Ra	-	Radium-228 by SW-846 Method 9320.

Items Reviewed
Holding Times
Chain-of-Custody and Case Narrative
Blank Results
MS/MSD Results
LCS Results
Laboratory and Field Duplicate Results
Chemical Yield

Qualifier Summary

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier(s)	Reason(s) for Qualification
nitrite nitrogen, nitrate nitrogen, and nitrite/nitrate nitrogen	L56453	All samples	J/UR	1 – Grossly exceeded holding time
boron	L56453	All samples, except STSB05_66-71	UJ	2 – Method blank contamination
calcium	L56453	STSB06_56-61	UJ	2 – Method blank contamination
chromium	L56453	STSB06_56-61 and STSB06_66-71	UJ	2 – Method blank contamination
sodium	L56453	STSB06-FD_0.5-3	UJ	2 – Method blank contamination
radium-226	L56453	STSB06-FD_0.5-3, STSB06_35-45, and STSB06_56-61	UJ	2 – Method blank contamination

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier(s)	Reason(s) for Qualification
radium-226	L56453	STSB05_0.5-3, STSB05_6-15, STSB05_45-55, STSB05_66-71, STSB05_76-81, and STSB06_0.5-3	J	D – Laboratory duplicate imprecision
boron	L56453	STSB05_66-71	J	6H – High LCS recovery
WAD cyanide	L56453	STSB05_0.5-3, STSB05_6-15, STSB05_45-55, STSB05_66-71, STSB05_76-81, and STSB06_0.5-3	UJ	4L – Low MS recovery
cobalt, copper, manganese, and radium-226	L56453	STSB06_0.5-3 and STSB06-FD_0.5-3	J/UJ	8 – Field duplicate imprecision
fluoride	L56453	STSB05_0.5-3, STSB05_6-15, STSB05_66-71, STSB05_76-81, and STSB06_0.5-3	J	9 – Result may be impacted from method blank contamination
total alkalinity and bicarbonate alkalinity	L56453	STSB05_76-81	J	9 – Result may be impacted from method blank contamination
radium-226	L56453	STSB06_6-15 and STSB06_66-71	J	9H – High chemical yield

Quantitation of Results: Based on standard project reporting requirements, all positive results reported at concentrations greater than the method detection limit but less than the reporting limit were qualified as estimated and have been flagged “J” on the data tables. (Valid Reason Code: T)

Based on standard project reporting requirements, all radium-226 and radium-228 results reported at concentrations less than the method detection limit were qualified as “not-detected” and have been flagged “U” on the data tables. (Valid Reason Code: 9)

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Date: August 21, 2020